#### FIG. 1A

999	tgtt	gta (	gata	tttt	taja	tttg	gaag	a aa	tact	gagc	acc	aagg	ctg (		tg aca et Thr 1	58
														tca Ser		106
														gaa Glu	aac Asn	154
_			_	_	_								_	tgt Cys	cta. Leu 50	202
														tac Tyr .65		250
														tct Ser		298
_						_			_				_	gcg Ala		346
		-	-	_	_		_	-						gtg Val	_	394
	Ala													gag Glu		442
														gtc Val 145		490
														gta Val		538
														ata Ile		586
-	_		-		ttt Phe						_		tgag	gaato	at	635
ccag	rcttc	aa g	rcaag	raact	t ag	atag	raagt	tgt:	gact	gct	caaa	itgto	cc c	caaga	acgct	695

### FIG. 1B

tgattctaag	gctattgcga	gtctgctgct	acacacttcg	gacgcaagac	ttttcaaggt	755
cagggttcaa	ggtagtacag	tcaaaggaag	tcttatgtta	agcaaaagaa	aaatttcagt	815
ggaaaagcta	gcagaaatgt	caacttgtca	aaaaaacaac	ttatggatta	tggcattgac	875
gttactagca	aaaaaaataa	aacaaaaaaa	aacaaaaa			913

### FIG. 2A

aag	ctta	att	taac	aaaa	tt g	gaaa	aacc	t aa	acta	tact	gtg	ctct	ggt	gacc	tagcaa	60
tca	aata	atc	acag	tcat	tt g	gtca	atgt	c ta	tgat	taac	tca	atga	gac	agga	tgtttg	120
gct	atag	cac	cagg	taca	aa a	aata	tatt	t tc	atga	agga	tca	ctcc	ctc	ttat	gtaata	180
gat	ttgg	gtg	agtg	agtg	ag t	gagt	gagt	g ca	tgga	ctca	cag	cttt	tgg	cttt	ctgaaa	240
tac	cctg	cat	cagt	cttg	tt a	tgat	gatt	c ct	tagt	gctg	gga	tgga	tca	tcca	ggcatt	300
taa	ggta	aca	cgat	ggta	at t	cttt	gctca	a tt	tttc	aggg	aaa	aaaa	aaa	gtta	tcactt	360
cca	aagt	cgg.	cata	gtca	cc c	gaag	taaa	a aa	aaaa	aaaa	aaa	aaaa	aag	cctca	agaggc	420
aaa	ggaa	agg (	ggcc	gcaa	cc t	tggt	taacı	t gt	gaaa	tgac	gaa	tgag	aaa	actc	ctcctg	480
ctg	aaga	tat	tcag	gtat	at a	aagg	cacat	t ga	agga	aaac	tca	aaac	atc .	attgi	tcatat	540
aca	catc	ttc ·	tgga	tttt	tt a	gctt	gcaaa	a aa							at atg	595
									Me	et Se 1	er T	ar L	ys P	ro A	sp Met	
		_	_	_						_				att	-	643
<u>iie</u>	GIn	10	Cys	Leu	Trp	Leu	15	TIE	Leu	мес	GLY	20	Pne	Ile	Ala	
				_	_	_			_		_		-	aga	-	691
GTA	25		Ser	Leu	Asp	30	Asn	ren	Leu	Asn	35	HIS	Leu	Arg	Arg	
_					_	-		_	_	_	_	_		tca		739
40	Inr	Trp	GIN	Asn	45	Arg	HIS	Leu	ser	50	Met	ser	Asn	Ser	55	
														caa		787
PIO	vaı	GIU	Cys	60 Leu	Arg	GIU	ASII	тте	65	Pne	GIU	Leu	Pro	Gln 70	GIU	
														gcc		835
Pne	Leu	GIN	75	Thr	GIII	PIO	Mec	80 57	Arg	Asp	TTE	ьув	85	Ala	Pne	•
														acc		883
ryr	GIU	90	ser	Leu	GIN	Ala	95	ASII	тте	Pne	ser	100	HIS	Thr	Pne	
														ctt		931
ьys	Tyr 105	Trp	гЛа	GIU	arg	110	Leu	гÀв	GIN	TTE	115	тте	GTÅ	Leu	Asp	
														aat		979
31n 120	GIN	Ala	Glu	Tyr	Leu 125	Asn	GIN	cys	ьeu	G1u 130	GLU	Asp	GÌU	Asn	G1u 135	

## FIG. 2B

aat gaa gac atg aaa gaa atg aaa gag aat gag atg aaa ccc tca gaa 10 Asn Glu Asp Met Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu 140 145 150	027
gcc agg gtc ccc cag ctg agc agc ctg gaa ctg agg aga tat ttc cac Ala Arg Val Pro Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His 155 160 165	075
agg ata gac aat ttc ctg aaa gaa aag aaa tac agt gac tgt gcc tgg 11 Arg Ile Asp Asn Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp 170 175 180	L23
gag att gtc cga gtg gaa atc aga aga tgt ttg tat tac ttt tac aaa 11 Glu Ile Val Arg Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys 185 190 195	L71
ttt aca gct cta ttc agg agg aaa taaggtatat ttttggaatt aaaattcctt 12 Phe Thr Ala Leu Phe Arg Arg Lys 200 205	
ttccctccga aatctctttc tccttctcct cctccatctt ctttttaagg attgttgtgc 12	285
tgtcctgtaa gcctgtcctc agttggactg gtagcctcgg aacatcaggg acactcacct 13	345
ctctaaggag aggtaatgcc aaccatcctc agggtgacca agagtctcct tagaaagtct 14	105
ttaagacatt tttaaaggaa taagattccc tctccgtctt cttctattct ctcttgctct 14	165
tttctgtggc cattttgaaa gagctttgct atatatacca cctgtggact tcaccaagac 15	525
aatggctaga ggatagggag cagagaatgt tgcaaaatgg taacatttca atgacttaac 15	85
tgttttgctg ccaaggttgc ttatcctatg aaaattcagc acattaaaag agcttataca 16	45
tgctccctag agtcaatact cttgcatttt ccccctcctg ctcgggggga aaaaggttga 17	705
cattletgge ceattleett eteagettgg titgtitgaa tigatgettg tggaatggta 17	165
tttcattact ttaagagtga agatccatag tgaaattgga tggatggttg aattagacga 18	125
ccattaagct t	336

		1 .				50
	huIFN-L	MSTKPDMIQK	CLWLEILMGI	FIAGTLSLDC	NLLNVHLRRV	TWQNLRHLSS
	raIFN-L	~~~~~MTLK	YLWLVALVAL	YISPIQSQNC	VYLDHT	ILENMKLLSS
	huIFN-β	~~~~MTNK	CLLQIALLLC	FSTTALSMSY	NLLGFLQRSS	NFQCQKLLWQ
	cons	MT-K	CLWL-AL	FILSC	NLL-V-LR	QN-KLLSS
			-			• .
		51				100
	huIFN-L	MSNSFPVECL	RENIAFELPQ	EFLQYTQPMK	RDIKKAFYEM	SLQAFNIFS.
	raIFN-L	IRTTFPLRCL	KDITDFEFPQ	EILLYVQHVK	KDIKAVTYHI	SSLALIIFSL
13	huIFN-β	LNGRLEY.CL	KDRMNFDIPE	EIKQLQQFQK	EDAALTIYEM	LQNIFAIFRQ
	cons	FPCL	KDFE-PQ	EILQY-QK	-DIKYEM	SAF-IFS-
ıŌ					•	
14		101				150
' <del>1</del>	huIFN-L				EEDENENEDM	
1# 18	raIFN-L	KDSISLATEE			*	· ·
171	huIFN-β	DSSSTGWNET		-		
1 pp .	cons	SW-E-	-LE-IGL-	-QLCL	-EEENENED-	-E-K
		•			•	
		151				200
<u> </u>	huIFN-L	-			DCAWEIVRVE	
	raIFN-L				FCAWKIVVVE	
[]	huIFN-β			LHYLKAKEYS		ILRNFYFINR
<b>!</b> =	cons	SESS	LEL-RYF-RI	FLK-KKYS	-CAW-IVRVE	IRRCFY-FYK
	•					•
	les Trong	201				
		FTALFRRK				•
	raIFN-L	LLNMN~~~				·
	· / · · · · · ·	LTGYLRN~				
	cons	LTR				,

cat	_	_	_		ctc Leu 5	_			_			_			48
_	-	_		_	acc Thr			_	_	-	_		_		96
_	_		-		cct Pro			_	_		_	_			144
	_	_		_	gca Ala	_						_		cta Leu	192
					aaa Lys										240
					tcg Ser 85										288
					gag Glu										336
					tca Ser										384
	Lys				aga Arg										432
					aag Lys										480
_					ctg Leu 165	_	_		taat	:ggat	cc			-	520

cat	_	Cys	_		_	-			_		aat Asn	_			48
_	-			_				-	_	_	ctg Leu		_		96 .
_	_							_	_		gtc Val	_			144
											tct Ser 60			ctg · Leu	192
											aca Thr				240
											cag Gln				288
											gag Glu				336
											tac Tyr			ttg Leu	384
											aat Asn 140				432
									Glu		cgt Arg				480
					ctg Leu 165				taat	ggat	cc				520

tet aga agg agg at aga at cta agg tet age at ctg ctg agg at agg at tet car ctg cgt st acc ttg gt aga at ctg agg at agg at agg at tet ctg agt aga ttt cat ctg aga at cta agg at agt at agg at tet ctg agg aga at tet agg ttt ctg agg agg at at car ctg agg agg at agg at agg at tet ctg agg agg at agg agg
Arg Val Thr Trp Gln Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser 15 20 25 25 25 25 25 25 25 26 20 20 20 20 20 20 20 20 20 20 20 20 20
Phe Pro Val Glu Cys Leu Arg Glu Asn Ile Ala Phe Glu Leu Pro Gln 30 Separate Ctg caa tac acc caa cct atg aag agg gac atc aag aag gcc Glu Phe Leu Gln Tyr Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala 45 Separate Ctg caa gcc ttc acc atg aag agg gac atc aag aag gcc ttc tat gaa atg tcc cta cag gcc ttc aac atc ttc agc caa cac acc Phe Tyr Glu Met Ser Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr 60 Separate Ctg aaa cac acc ctg aag aga cac ctc aaa atc caa ata gga ctt Phe Lys Tyr Trp Lys Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu 75 Separate Ctg aac cac acc acc 85 Separate Ctg aac cac acc acc 86 Separate Ctg aac cac acc acc 87 Separate Ctg aac cac acc acc acc 88 Separate Ctg aac cac acc acc acc 89 Separate Ctg acc cac acc acc acc acc acc 89 Separate Ctg acc acc acc acc acc acc acc acc acc ac
Glu Phe Leu Gln Tyr Thr Gln Pro Met Lys Arg Asp Ile Lys Lys Ala  ttc tat gaa atg tcc cta cag gcc ttc aac atc ttc agc caa cac acc Phe Tyr Glu Met Ser Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr 60  ttc aaa tat tgg aaa gag aga cac ctc aaa caa atc caa ata gga ctt Phe Lys Tyr Trp Lys Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Phe Lys Tyr Trp Lys Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu Phe Lys Tyr Trp Lys Glu Arg His Leu Lys Gln Ile Glu Asp Glu Asn Asp Gln Gln Ala Glu Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Ilo  gaa aat gaa gac atg aaa gaa atg aaa gga atg aat gag atg aac ccc tca Glu Asn Glu Asp Met Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Ilo  gaa gcc agg gtc ccc cag ctg agc agc ctg gaa ctg agg aga tat ttc Glu Ala Arg Val Pro Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe I30  tgg gag att gtc cga gtg gaa atc cgt cgt cgt tgc ctg tac tac ttt tac Trp Glu Ile Val Arg Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr I55  aaa ttt acc gct ctg ttc cgt cgt aaa taatgagtcc  568
Phe Tyr Glu Met Ser Leu Gln Ala Phe Asn Ile Phe Ser Gln His Thr 60    ttc aaa tat tgg aaa gag aga cac ctc aaa caa atc caa ata gga ctt   Phe Lys Tyr Trp Lys Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu   80    gat cag caa gca gag tac ctg aac caa tgc ttg gag gaa gac gag aat   Asp Gln Gln Ala Glu Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn   95    gaa aat gaa gac atg aaa gaa atg aaa gag aat gag atg atg
Phe Lys Tyr Trp Lys Glu Arg His Leu Lys Gln Ile Gln Ile Gly Leu 90  gat cag caa gca gag tac ctg aac caa tgc ttg gag gaa gac gag aat 3399 Asp Gln Gln Ala Glu Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu Asn Glu Asn Glu Asn Glu Asp Met Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser 110  gaa gcc agg gtc ccc cag ctg agc agc ctg gaa ctg agg aga tat ttc Glu Ala Arg Val Pro Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe 125  cac agg ata gac aat ttc ctg aaa gaa aag aaa gaa aag aaa tac agt gac tgt gcc 483  tgg gag att gtc cga gtg gaa atc cgt cgt cgt tgc ctg tac tac ttt tac Trp Glu Ile Val Arg Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr 155  aaa ttt acc gct ctg ttc cgt cgt aaa taatggatcc Lys Phe Thr Ala Leu Phe Arg Arg Lys  Sac cat gag ctg gct ctg tac tac ttt tac Soc Lys Phe Thr Ala Leu Phe Arg Arg Lys  Sac cat gag ata tac gct ctg ttc cgt cgt aaa taatggatcc Soc Soc Lys Phe Thr Ala Leu Phe Arg Arg Lys
Asp Gln Gln Ala Glu Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn 105  gaa aat gaa gac atg aaa gaa atg aaa gaa atg aaa gag aat gag atg at
Glu Asn Glu Asp Met Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser 110 115 120 120 120 120 120 120 120 120 120 120
Glu Ala Arg Val Pro Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe 125  Cac agg ata gac aat ttc ctg aaa gaa aag aaa tac agt gac tgt gcc His Arg Ile Asp Asn Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala 140  tgg gag att gtc cga gtg gaa atc cgt cgt tgc ctg tac tac ttt tac Trp Glu Ile Val Arg Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr 155  aaa ttt acc gct ctg ttc cgt cgt aaa taatggatcc Lys Phe Thr Ala Leu Phe Arg Arg Lys  568
His Arg Ile Asp Asn Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala 140  tgg gag att gtc cga gtg gaa atc cgt cgt tgc ctg tac tac ttt tac Trp Glu Ile Val Arg Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr 155  160  165  170  aaa ttt acc gct ctg ttc cgt cgt aaa taatggatcc  Lys Phe Thr Ala Leu Phe Arg Arg Lys
Trp Glu Ile Val Arg Val Glu Ile Arg Arg Cys Leu Tyr Tyr Phe Tyr 155 160 165 170  aaa ttt acc gct ctg ttc cgt cgt aaa taatggatcc 568  Lys Phe Thr Ala Leu Phe Arg Arg Lys
Lys Phe Thr Ala Leu Phe Arg Arg Lys

ţct.	agaa	agg a	agga	ataa	ca t	_			_	ctg Leu 5		_		_	_	51
_	_				aat Asn	_	_		_	_	_	_	_			99
		_	_	_	cta Leu	_	-			_		-	_		caa Gln	147
		_			acc Thr			_	_		_		_	_	gcc. Ala	195
					cta Leu											243
					gag Glu 80											291
					tac Tyr											339
					aaa Lys											387
	_		_		cag Gln	_	-	_	-	-	_					435
			_		ttc Phe	_		_	-			_	_	_	-	483
					gtg Val 160											531
					ttc Phe				taat	ggat	.cc					568

			tgt Cys 5											48
			aga Arg											96
			gaa Glu											144
			cct Pro										gaa Glu	192
			gcc Ala											240
			cac His 85											288
			aac Asn											336
			atg Met											384
	_	_	agc Ser	_	_	_	_		_					432
		_	aaa Lys	_	_			_	_	_	_	 		480
			atc Ile 165											528
			cgt Arg			ggat	cc							556